ALASKA SNAP-Ed
NEEDS ASSESSMENT

2014

Table of Contents

Executive Summary

Family Nutrition Programs at the Department of Health and Social Services commissioned the University of Alaska Fairbanks to conduct a needs assessment for the Supplemental Nutrition Assistance Program Education (SNAP-Ed). The purpose of the needs assessment was to understand which geographic regions and populations in Alaska have the greatest need for SNAP-Ed services and to provide recommendations for service delivery structure and evidence-based intervention strategies appropriate and relevant to Alaska. A number of existing data sources were used to identify and understand which geographic regions and populations have the greatest need for SNAP-Ed services. Quantitative and qualitative data were collected from nutrition professionals, nutrition educators, and low-income individuals to understand multiple perspectives on the nutrition education needs of low-income Alaskans. Data from nutrition professionals and educators were collected using a web-based survey and in-depth interviews. Data from low-income individuals were collected using a paper survey.

Key findings include:

- Based on population size, poverty levels, fruit and vegetable intake, and obesity prevalence, the following five regions were identified as having the greatest need for SNAP-Ed services and/or reach the greatest number of individuals: Bethel Census Area, Matanuska- Susitna Census Area, the municipality of Anchorage, Kenai Peninsula Borough, and Nome Census Area.
- Alaska Native adults are the second largest group in Alaska and experience substantial socio-economic and health disparities compared to white adults. SNAP-Ed services should focus on Alaska Native people given the high prevalence of poor health indicators coupled with the relative scarcity of tailored education materials.
- SNAP-Ed services should also prioritize Alaskan youth since childhood and adolescence represent critical life stages for developing healthy habits.
- The vast distances, low population density and lack of affordable travel in Alaska highlight the importance of adopting community-based and public health approaches. These approaches are likely to reach the greatest numbers of people, have the greatest sustained impact, and be cost-effective.
- Systems changes at multiple levels of the social ecological model will have the most widespread and sustainable impact in the long-term. In the short-term, social marketing and mass communication through school, store, and community campaigns—based on rigorous formative research-- are strongly encouraged and should be prioritized.
- In Alaska, the most prevalent dietary shortfalls are inadequate vegetable and fruit intake and high sugar sweetened beverage intake. It's recommended that SNAP-Ed messages should focus on these two prevalent behaviors.
- To leverage financial and intellectual resources and to maximize staffing administrative infrastructures, SNAP-Ed should consider forming a workgroup composed of key stakeholders that meets to address shared messaging, training opportunities, and evaluation efforts.

I. Project Scope and Goals

Family Nutrition Services at the Department of Health and Social Services commissioned the University of Alaska Fairbanks to conduct a needs assessment for the Supplemental Nutrition Assistance Program Education (SNAP-Ed). The goal of SNAP-Ed is to improve the likelihood that persons eligible for SNAP will make healthy choices within a limited budget and choose active lifestyles consistent with the current Dietary Guidelines for Americans and the MyPlate food guide. The purpose of the needs assessment was to:

1. To collect, compile, and analyze quantitative and qualitative data that can be used to rank areas of the state according to their need for SNAP-Ed services, based on: obesity prevalence; behavioral, socio-economic, and environmental risk factors; and available nutrition education resources and services.
2. To provide recommendations for service delivery structure and evidence-based intervention strategies appropriate and relevant to Alaska.

The needs assessment was designed to consider two important factors: 1) the unique Alaskan landscape and 2) the transformation of SNAP-Ed into a Nutrition Education and Obesity Prevention Grant Program that explicitly embraces comprehensive community- based and public health approaches.

II. Methodology

Existing Data:

A number of existing data sources were used to identify and understand which populations and/or regions in Alaska are at elevated risk for poor diet quality and obesity. Data were examined to assess the following indicators of risk: socio-demographic characteristics, nutrition-related behaviors and lifestyle characteristics, the prevalence of nutrition-related diseases, and the nutrition environment.

Sources of data used for the needs assessment included:

- The U.S. Census Bureau's American Community Survey
- The Alaska Behavioral Risk Factor Surveillance System (BRFSS)
- The Alaska Youth Behavioral Risk Factor Surveillance System (YRBSS)
- The Alaska Food Cost Survey
- Department of Public Assistance

Indicators of risk were compared among the 29 Alaska Census and Borough Areas, since these areas represent the smallest geographical unit for which we have interpretable data on risk in Alaska. Indicators of risk were also compared between Alaska Native people and whites, the two largest population segments in Alaska. As possible, data were examined for youth since they represent an important audience for nutrition education and a critical audience for obesity prevention.

New Data

Quantitative and qualitative data were collected from nutrition professionals, nutrition educators, and low-income individuals to understand multiple perspectives on the nutrition education needs of low-income Alaskans. Data from nutrition professionals and educators were collected using a web-based survey and in-depth interviews. Data from low-income individuals were collected using a paper survey. All procedures were approved by the Institutional Review Board at the University of Alaska Fairbanks.

Web-based survey for nutrition professionals and educators
A web-based survey was administered to understand perspectives of nutrition professionals and educators on nutrition education needs in Alaska. Survey questions included topics such as current nutrition practices, challenges and opportunities for delivering nutrition education in Alaska, nutrition and health priorities in Alaska, and delivery method. The survey included multiple choice, rank order scaling, and open-ended questions. The target audience was recruited via professional list-serves, e-mail distribution lists, and word of mouth. Our goal was to reach as many individuals involved in delivering nutrition education in Alaska as possible.

In-depth Interviews for nutrition professionals and educators
In-depth interviews were conducted with nutrition educators in Alaska. The in-depth interviews were used to explore in greater depth the findings that emerged from the web-based survey. Interview questions included topics similar to the web-based survey, such as: challenges and opportunities for delivering nutrition education in Alaska, nutrition and health priorities in Alaska, delivery method, and perceptions of the effectiveness of a public health approach. We used a snowball sampling technique to recruit the target audience, starting with Cooperative Extension agents and educators, WIC clinics, Diabetes Prevention Programs and food banks.

Paper based survey for low-income individuals.
A paper survey was administered to low-income individuals. Survey questions included topics such as: nutrition goals, barriers to consuming a healthy diet, and nutrition education needs. The target audience was recruited from food pantries, WIC clinics, and other food assistance programs. Income eligibility for SNAP was not verified.

III. Needs assessment findings

Existing Data:

Population estimates, population density, and ethnic composition have an important influence on nutrition education reach, delivery method, and messages. Table 1 compares the population estimate, population density, and ethnic composition (i.e. percent Alaska Native people) by Alaska Census and Borough Areas, which are in turn grouped by the six Alaska Public Health Regions.

There are pronounced differences in the population size and density of the Census and Borough Areas. The population estimates of the Census and Borough Areas range from a high of 300,950 in Anchorage to a low of 642 in the Yakutat City Borough. Likewise, the population density ranges from a high of 171.2 in Anchorage and low of <0.1 in Yukon- Koyukuk. The state-wide average population density is 1.2. Nationally, the population density is 87.4 persons per square mile.

Table 1
Population estimates, population density, and percent Alaska Native by census and borough area

Public Health Region	Census and Borough Area	Population Estimate 2013	Population Density	% Alaska Native 2012
Anchorage and Mat-Su Region	Municipality of Anchorage	300,950	171.2	8.1
	Matanuska-Susitna Borough	95,192	3.6	5.8
Gulf Coast Region	Kenai Peninsula Borough	57,147	3.4	7.3
	Kodiak Island Borough	14,135	2.1	13.2
	Valdez-Cordova Census Area	9,763	0.3	13.5
Interior Region	Denali Borough	1,867	0.1	3.7
	Fairbanks North Star Borough	100,436	13.3	7.2
	Southeast Fairbanks Census Area	6,985	0.3	11.4
	Yukon-Koyukuk Census Area	5,695	0.0	70.9
Northern Region	Nome Census Area	9,892	0.4	74.3
	North Slope Borough	9,686	0.1	52.9
	Northwest Arctic Borough	7,685	0.2	80.2
Southeast Region	Haines Borough	2,592	1.1	9.5
	Hoonah-Angoon Census Area	2,145	0.3	39.8
	Juneau City and Borough	32,660	11.6	11.6
	Ketchikan Gateway Borough	13,729	2.8	14.2
	Petersburg Census Area	3,774	1.2	16.9
	Prince of Wales-Hyder Census Area	5,786	1.4	39.9
	Sitka City and Borough	9,020	3.1	16.5
	Skagway Municipality	995	2.1	4
	Wrangell City and Borough	2,400	0.9	16.1
	Yakutat City and Borough	642	0.1	35
Southwest Region	Aleutians East Borough	3,092	0.4	23.4
	Aleutians West Census Area	5,511	1.3	14.6
	Bethel Census Area	17,758	0.4	81.5
	Bristol Bay Borough	960	2.0	33.1
	Dillingham Census Area	5,010	0.3	70.9
	Lake and Peninsula Borough	1,648	0.1	65.2
	Wade Hampton Census Area	7,977	0.4	93.2

The proportion of the population that is Alaska Native also varies substantially, which has important implications for the need to tailor SNAP-Ed messages. In the Wade Hampton Census Area 93.2% of the population is Alaska Native compared to 3.7% in the Denali Borough. Although these differences may not be statistically different they illustrate the heterogeneity that exists in Alaska.

Poverty and SNAP participation in Alaska: statewide and by geographic region and ethnicity

According to data from the BRFSS, on average between 2009 and 2011, 8.9% of the population in Alaska fell below the federal poverty threshold (FPT). In the United States, 14.9% of the population falls below the FPT and Alaska ranks 50th among states in poverty levels (FRAC), suggesting that poverty levels may be lower in Alaska. Figure 1 shows that statewide data, however, masks substantial ethnic and regional disparities in poverty levels. Statewide, 27.4% of Alaska Natives fall below the FPT, compared to 4.3% of Whites. Table 2 shows that poverty levels in 11 of the 29 Census/ Borough Areas were higher than the state average. Poverty levels were more than triple the statewide average in 6 Census/ Borough Areas: Bethel, Dillingham, Nome, Northwest, Wade-Hampton, and Yukon- Koyokuk. In Wade-Hampton, for example, 55.4% of the population falls below the FPT. Table 3 also illustrates that in every Census/ Borough Area Alaska Native people are substantially more likely to fall below the FPT than whites. For example, in Anchorage, 3% of Whites fall below the FPT, compared to 20.2% of Alaska Native people.

Over the past five years participation in SNAP has increased 60.2% (FRAC). According to estimates from the Department of Public Assistance, the average monthly participation in SNAP in 2013 was 93,771. Average monthly benefits per person were $170.07 (FRAC). In 2012, Alaska was ranked 13th by the USDA SNAP Program Access Index, which is designed to indicate the degree to which low-income people have access to SNAP benefits.

Although Alaska Native people constitute only 14.8% of the population in Alaska, they constitute 39.3% of the population receiving SNAP benefits (table 3). Given the range in population size among the census and borough districts, it is not surprising that SNAP caseloads vary by region. The highest caseload is in Anchorage (15,074) and the lowest in Skagway (11).

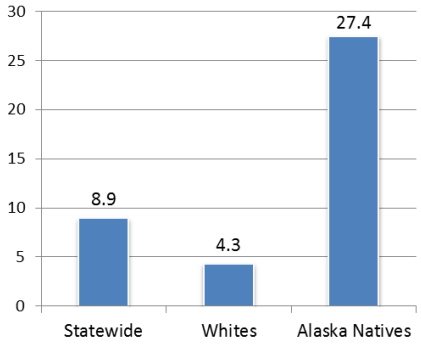

Figure 1
Percent of the population that falls below the federal poverty level, statewide and by ethnicity

Table 2: Number of people receiving SNAP benefits and % of people below poverty threshold, by borough/ census Areas				
Census and Borough Areas	People receiving SNAP –ed	Persons below poverty % Total	Persons below poverty % White	Persons below poverty % Alaska Native
Aleutians East Borough	60	11.7	DSU	DSU
Aleutians West Census Area	68	6.5	DSU	DSU
Anchorage	15,074	6.3	3	20.2
Bethel Census Area	1,665	33.3	11	42.5
Bristol Bay Borough	34	8.3	DSU	DSU
Denali Borough	41	7.2	5.1	DSU
Dillingham Census Area	366	28.0	0	42.5
Fairbanks North Star Borough	3,608	6.2	4.4	15.5
Haines Borough	105	7.1	1.8	DSU
Hoonah-Angoon Census Area	218	15.6	DSU	DSU
Juneau City and Borough	1,835	5.3	2.6	8.3
Kenai Peninsula Borough	2,778	8.2	6.1	16.4
Ketchikan Gateway Borough	1,213	6.9	2.7	18.7
Kodiak Island Borough	471	7	2.8	12.6
Lake and Peninsula Borough	103	DSU	DSU	DSU
Matanuska-Susitna Borough	5,135	7.7	6.4	27
Nome Census Area	916	36.6	2.3	46
North Slope Borough	360	15.4	0	24.1
Northwest Arctic Borough	661	32.4	0	39.5
Petersburg Census Area	232	11	9.6	DSU
Prince of Wales-Hyder Census Area	572	13.6	8.4	21.4
Sitka City and Borough	475	7.3	7.4	DSU
Skagway Municipality	11	DSU	DSU	DSU
Southeast Fairbanks Census Area	381	9.4	5.3	DSU
Valdez-Cordova Census Area	416	6.6	4.9	DSU
Wade Hampton Census Area	904	55.4	DSU	61.9
Wrangell City and Borough	142	9.1	9.9	DSU
Yakutat City and Borough	38	DSU	DSU	DSU
Yukon-Koyukuk Census Area	877	28.2	5.6	38.3

Table 3: SNAP participation statewide and by ethnicity		
	Average SNAP recipients/mo.	% of pop. receiving SNAP
Alaska Statewide	93,771	--
White	31,927	34.0%
Alaska Native	36,886	39.3%

Food Security

According to the 2006 BRFSS, 10.8% of Alaskans statewide, 8.2% of Whites and 19.3% of Alaska Native people were food insecure (figure 2). This estimate includes both individuals who experience low and very low security.

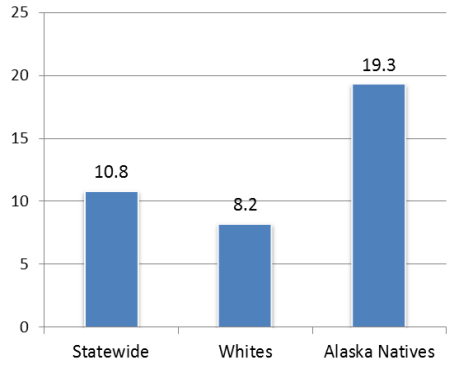

Figure 2
Food insecurity levels statewide and by ethnicity (BRFSS, 2006)

Food security data are only available by Public Health Region. Data show that the Northern and Southwest regions have the highest levels of food insecurity (table 4). In every Public Health Region, Alaska Native people are more than twice as likely to be food insecure as Whites.

Table 4
Food insecurity levels by public health region

Public Health Region	Total	White	Alaska Native
Anchorage/ Mat-Su	9.8	8.6	DSU
Gulf Coast	10.9	8.6	17.9
Interior	9.6	7.8	17.6
Northern	18.6	DSU	19.2
Southeast	7.5	5.5	17.8
Southwest	26.4	1	35.4

Nutrition-related health status indicators: Overweight, obesity, diabetes, heart disease

Adult Obesity

The prevalence of obesity in Alaska has doubled since 1991 and obesity costs the state $459 million each year in medical healthcare costs (Alaska obesity Prevention Report). In 2011, approximately two-thirds of adults in Alaska were overweight or obese. There is little variability

in the prevalence of obesity by Census/ Borough Areas or ethnicity in Alaska (table 5). Although not necessarily of statistical significance, the prevalence of overweight and obesity was 10% higher than the statewide average in 3 Census/ Borough Areas: Bristol Bay, Hoonah-Angoon, and Lake and Peninsula. The prevalence of overweight and obesity was 10% lower in one Area: Wade- Hampton.

Also of note, the prevalence of overweight and obesity among Alaska Native adults is at least 10% higher than among White adults in 5 of the larger, more urban Census/ Borough Areas. In contrast, the prevalence is at least 10% lower among Alaska Native people than whites in two of the more rural Census/ Borough Areas that are considered among the more traditional regions in the state.

Table 5:
Prevalence of overweight and obesity by census and borough area (BRFSS, 2009- 2011)

Census and borough area	Overweight/ Obese (%)		
	Total	White	AK Native
Aleutians East	65.2	DSU	DSU
Aleutians West (CA)	67.4	73.9	DSU
Anchorage	66	63.4	76.7
Bethel (CA)	63.7	79.8	58.7
Bristol Bay	81.6	DSU	DSU
Denali	66.1	65.4	DSU
Dillingham (CA)	69.1	66.5	68.3
Fairbanks North Star	64.3	64.7	66.8
Haines	63	59.2	DSU
Hoonah-Angoon (CA)	79.3	DSU	DSU
Juneau	66.5	65.1	79.4
Kenai Peninsula	64	63.4	74.8
Ketchikan Gateway	68.9	68	77
Kodiak Island	68.7	63.9	70.1
Lake and Peninsula	80.8	DSU	DSU
Matanuska-Susitna	68.9	68.6	80.7
Nome (CA)	63.1	61.5	62.5
North Slope	64.3	80.3	65.8
Northwest Arctic	71.3	81.2	70.2
Petersburg	69.6	66.5	DSU
Prince of Wales-Hyder (CA)	72.9	58.5	89.9
Sitka	64.2	63.7	DSU
Skagway	DSU	DSU	DSU
Southeast Fairbanks (CA)	69.3	70.5	DSU
Valdez-Cordova (CA)	70.4	69.8	69.3
Wade Hampton (CA)	56.1	DSU	55.7
Wrangell	66.3	68.5	DSU
Yakutat	DSU	DSU	DSU
Yukon-Koyukuk (CA)	67.3	65.6	66.4

Childhood obesity

Childhood obesity is of particular concern since overweight children tend to become overweight adults. According to the Youth Risk Behavior Surveillance System (YRBSS), in 2013, 26.1% Alaska high school students were either overweight or obese. Alaska Native youth were more likely to be obese (16%) than white youth (9.6%) (figure 3). Overall, 29% of Alaskan middle and high school students described themselves as slightly or very overweight.

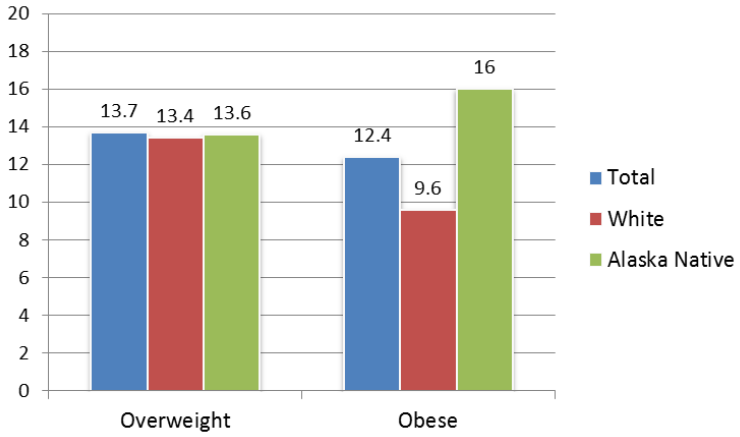

Figure 3
Percentage of students who were overweight (i.e., at or above the 85th percentile but below the 95th percentile for body mass index, by age and sex) or obese**

Nutrition- related behaviors and lifestyle characteristics

Vegetable and fruit consumption among adults

The importance of eating vegetables and fruit is well understood. A recent study found that consuming seven or more servings of fruit and vegetables a day reduces your risk of death by 42 percent compared to eating less than one portion. Data from the BRFSS indicate that the majority Alaskan adults (77%) consume fewer than the recommended daily servings of vegetables and fruit. Adults in rural regions of the state are less likely to meet the recommended intake of vegetables and fruit (table 6). In Nome, for example, nearly 90% of adults do not consume the recommended intake of vegetables and fruit.

Table 6 Percent of adults who consume fewer than 2+ servings of fruit and 3+ servings of vegetables (BRFSS, 2009-2011)			
	Total	White	AK Native
	2009-2011	**2009-2011**	**2009-2011**
Aleutians East	DSU	DSU	DSU
Aleutians West	78.6	DSU	DSU
Anchorage	76.6	76.6	74.7
Bethel	83.9	78.2	88.3
Bristol Bay	DSU	DSU	DSU
Denali	76.7	88.4	DSU
Dillingham	76.4	DSU	78.4
Fairbanks North Star	76.2	75.4	83.8
Haines	66.3	60.8	DSU
Hoonah-Angoon	DSU	DSU	DSU
Juneau	77	74.1	82.7
Kenai Peninsula	78.2	77.6	78.2
Ketchikan Gateway	73.5	75.2	DSU
Kodiak Island	76.3	76.4	DSU
Lake and Peninsula	DSU	DSU	DSU
Matanuska-Susitna	77.2	76.7	87.8
Nome	89.7	83.4	92.1
North Slope	77	DSU	82.7
Northwest Arctic	92	DSU	93
Petersburg	69.5	72.3	DSU
Prince of Wales-Hyder	83.7	77.6	DSU
Sitka	75.1	71.8	DSU
Skagway	DSU	DSU	DSU
Southeast Fairbanks	80.1	73.7	DSU
Valdez-Cordova	83.5	82.1	DSU
Wade Hampton	78.3	DSU	77.7
Wrangell	80.4	DSU	DSU
Yakutat	DSU	DSU	DSU
Yukon-Koyukuk (CA)	88.5	91.4	86.2

Vegetable and fruit consumption among youth

According to data from the YRBSS, only 20% of Alaskan youth consumed vegetables or fruit five or more times over the past seven days (table 7). Alaska Native youth were less likely to meet recommendations for vegetable and fruit intake than White youth. Of particular concern, approximately 9% of Alaska Native youth and 4% of white youth reported eating zero vegetables a day over the past seven days.

Table 7 Vegetable and fruit intake among Alaska Native youth, statewide and by ethnicity (YRBSS, 2013)			
	Total	White	Alaska Native
Ate vegetables or fruit 5 or more times per day over the past 7 days	19.9	20.5	14.7
Ate vegetables 3 or more times a day over the past 7 days	15.5	16.1	11.1
Ate vegetables 0 times a day over the past 7 days	5.8	4.2	8.6

Sugar sweetened beverage consumption among adults

Sugar sweetened beverages are widely recognized as contributing to weight gain. Data from the BRFSS indicate that in 2010, 46% of adults in Alaska consumed one or more sugar-sweetened beverage daily (figure 4). Sixty-eight percent of Alaska Native adults consumed one or more sugar-sweetened beverage daily, a significantly higher proportion than white adults (43%).

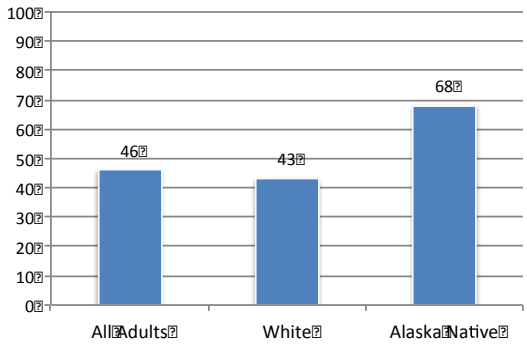

Figure 4
Proportion of adults consuming one or more sugar-sweetened beverages daily

The proportion adults consuming 1 or more SSB was substantially higher in the Northern (56.6%) and Southwest (66.2%) regions compared to the statewide average (table 8).

Table 8: **Servings of ssb and soda per day 1+**			
Public Health Region	Total	White	Alaska Native
Anchorage/ Mat-Su	42.9	40.7	49.1
Gulf Coast	34.3	31.2	56.4
Interior	42.4	40.4	59.9
Northern	56.6	DSU	68.6
Southeast	35.2	32.8	49.6
Southwest	66.2	38.9	76.4

Sugar sweetened beverage consumption among youth

According to the YRBSS, 15.8% of youth in Alaska consume one or more and 10.7% consume two or more sugar-sweetened beverages daily (table 9). Alaska Native Youth are more than twice as likely to consume sugar-sweetened beverages than white youth.

Table 9:
Percent of Alaska Native youth who consume sugar sweetened beverage daily (YRBS, 2013)

	Total	White	Alaska Native
Drank 1 or more SSB	15.8	11.9	21.8
Drank 2 or more SSB	10.7	6.6	16.6
Drank 3 or more SSB	5.5	3.3	9.7

Physical activity among adults

Findings from the BRFSS indicate that approximately 1 in 4 adults in Alaska do not meet the physical activity recommendation to get at least 150 minutes of moderate intensity physical activity a week (Alaska Obesity Facts report). There are no significant differences by region or ethnicity. The percentage of all Alaskans reporting some leisure time physical activity during the past month was 80.8% in 2012. The percentage of Alaskans reporting no leisure time activity was 19.2% (table 10). Screen time is a prevalent sedentary behavior in Alaska. Approximately three-quarters of adults in Alaska report 2 or more hours of screen time per day outside of work activities.

Table 10:
Percent of Alaskan Adults reporting no leisure time physical activity, 2009-2011

	Total	White	AK Native
Aleutians East	47.7	DSU	DSU
Aleutians West	19.9	5	DSU
Anchorage	20.6	16.4	25.2
Bethel	26.8	25.3	27.6
Bristol Bay	15.9	DSU	DSU
Denali	15.5	17.6	DSU
Dillingham	29.4	21.2	33.5
Fairbanks North Star	21	19.5	32.8
Haines	15.4	15	DSU
Hoonah-Angoon	13.6	DSU	DSU
Juneau	15.7	13.4	16.6
Kenai Peninsula	21.6	21.7	24.5
Ketchikan Gateway	26.4	22.6	28.8

Kodiak Island	15.8	12.8	15
Lake and Peninsula	47.5	DSU	DSU
Matanuska-Susitna	23.8	23.1	34.1
Nome	23.6	13.9	25.5
North Slope	31.9	13.2	34.7
Northwest Arctic	38.2	25.6	41.1
Petersburg	14.4	12.8	DSU
Prince of Wales-Hyder	24.5	25	24.5
Sitka	15.1	10	DSU
Skagway	DSU	DSU	DSU
Southeast Fairbanks	23.2	24.3	DSU
Valdez-Cordova	19.5	16.9	19.7
Wade Hampton	28.5	DSU	31.2
Wrangell	31.9	32.4	DSU
Yakutat	DSU	DSU	DSU
Yukon-Koyukuk	32.2	24.7	29.6

Physical activity among youth

According to data from the 2013 YRBSS, fewer than 20% of Alaskan youth reported attending physical education in an average week. More than one-third of youth (34%) reported playing electronic games and/or using a computer for non-school work more than three hours daily.

Health

According to data from the BRFSS, approximately 50% of Adults in Alaska report that their health is excellent or very good (table 11). White adults are substantially more likely to report that their health is excellent or very good compared to Alaska Natives adults. Likewise, Alaska Native adults are more likely to report that their health is fair or poor compared to white adults (table 12).

Table 11:
Percent of adults who report that their health is Excellent/very good

Public Health Region	Total	White	Alaska Native
Anchorage/ Mat-Su	52	57.1	37.9
Gulf Coast	55.9	55.2	42
Interior	54.9	59.1	32.8
Northern	42.8	50.3	43.1
Southeast	47.9	53.1	37.5
Southwest	47.8	63.3	40.2

Table 12: Percent of adults who report that their health is Fair/ Poor			
Public Health Region	Total	White	Alaska Native
Anchorage/ Mat-su	15	13.2	18.1
Gulf Coast	13.8	13.2	20.4
Interior	13.5	11.7	26.4
Northern	14.6	8.6	15.3
Southeast	20	16.2	25.6
Southwest	15	5.5	19.8

Nutrition environment

Food cost

Food cost is an important component of the food environment and has the potential to influence food security, food choices and ultimately health. Data from the Alaska Food Cost survey show that food cost in Alaska is higher than in the 48 contiguous states, represented by Portland, OR, and is particularly high in rural regions of the state (figure 5). In 2013, the Thrifty Food Plan, which specifies the food and amounts of foods to provide adequate nutrition for a family of four, cost $130.27 in Portland, OR. The cost of the Thrifty Food Plan was higher in every region in Alaska and more than double that in three regions: the Interior (all within the Yukon-Koyukuk Census Region), Southwest, and Northern regions.

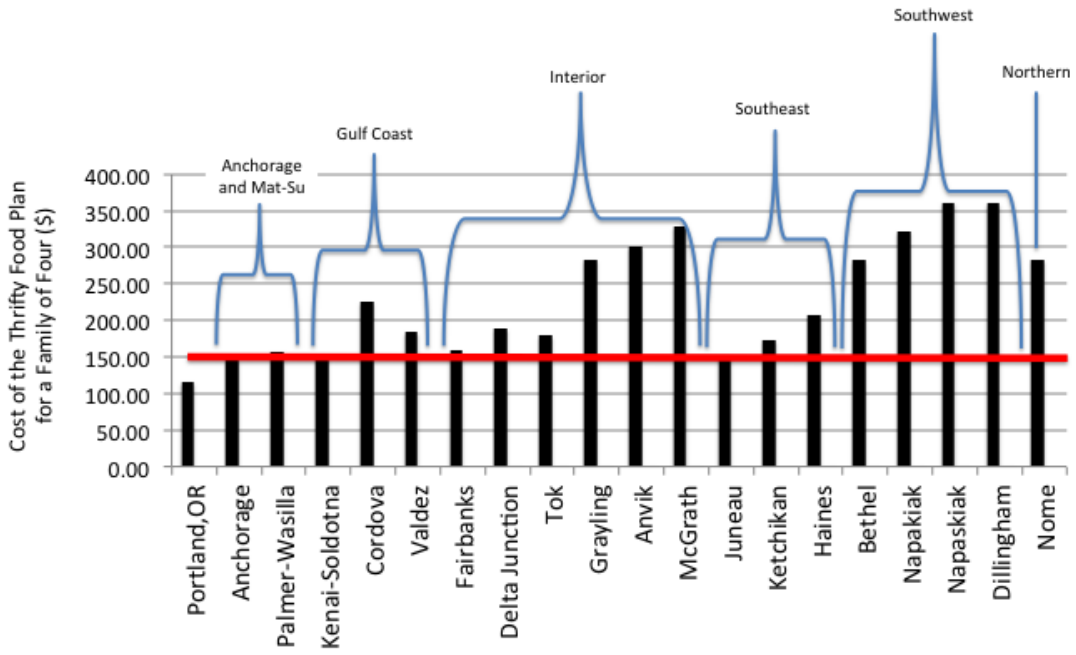

Figure 5: Cost of the Thrifty Food Plan for a family of four, by public health region. Data source: the Alaska Food Cost Survey

Farmers Markets

Farmers markets play an important and increasingly recognized role in improving access to healthy foods. The growing number of farmers' markets that accept SNAP benefits and WIC and Senior Farmers' Market Programs extend that access to low-income families and communities. The Alaska Farmers Market Association market directory lists 41 farmers' markets in Alaska, 9 of which accept SNAP benefits. The WIC Farmer's Market Program operates in Anchorage, Fairbanks, Delta Junction, Kenai Peninsula, Kodiak, Dillingham, Bethel, Petersburg, Sitka and Matanuska-Susitna Valley areas. The Senior Farmers' Market Program operates in all the above areas except Petersburg and Sitka.

According to a recent Gallup-poll conducted in metro areas in the United States, residents of Anchorage were the least likely to report having easy access to affordable vegetables and fruit in 2012-2013. Table 13 shows participation in the fruit and vegetable and Obesity Prevention Programs and the percent of free and reduced school lunches by school district and census and borough region.

Nutrition Environment in Schools

Schools are ideally positioned to promote healthy eating and an active lifestyle since they reach virtually all youth.

Free and reduced school lunches

Statewide, 46% of students qualify for free or reduced school lunch, which is a reflection of poverty levels. This percentage varies substantially by census and borough region, with a low of 27% in Juneau and a high of 92% in the Gateway school district.

Fruit and vegetable program

The Fresh Fruit and Vegetable Program (FFVP) is a federally assisted program providing free fresh fruits and vegetables to students in participating elementary schools during the school day. The FFVP is targeted to elementary schools with the highest free and reduced price enrollment. The FFVP contributes to a healthy food environment in schools and in some schools, may be the only source of fresh produce. In Alaska, virtually every district has at least one school that participates in the program.

Obesity prevention grantees (indicate which are title 1 schools)

Nine school districts in Alaska have received funding from the Alaska Obesity and Prevention Program to improve their nutrition and physical activity environments. Each district is required to hire a three-quarter time coordinator who is responsible for developing programs aimed at promoting healthy eating and an active lifestyle. The program will be evaluated by changes in student body mass index.

Table 13:
Nutrition characteristics of school districts, by census and borough district

Alaska Census and Borough Region	School District	Fruit & Vegetable program (# Participating Schools)	Obesity Prevention Grantee	% F&R School Lunch 2013-14
Aleutians East Borough	Aleutians East Borough	2		69%
Aleutians West	Aleutian Region	0		
Anchorage	Anchorage	37		42%
Bethel	Lower Kuskokwim	25		78%
	Yupiit Schools	3		
Bristol Bay Borough	Bristol Bay Borough	1		48%
Denali Borough	Denali Borough	0		--
Dillingham	Dillingham	1		72%
Fairbanks North Star Borough	Fairbanks	2		39%
Haines Borough	Haines	2		48%
Hoonah-Angoon	Chatham	1		87%
	Hoonah	1		76%
Juneau City and Borough	Juneau Borough	2		27%
Kenai Peninsula Borough	Kenai Peninsula Borough	14		39%
Ketchikan Gateway Borough	Ketchikan Gateway	4	✓	40%
Kodiak Island Borough	Kodiak Island	9	✓	49%
Lake and Peninsula Borough	Lake and Peninsula	12		65%
Matanuska-Susitna Borough	Matanuska-Susitna	6	✓	39%
Nome Census Area	Bering Strait	15	✓	64%
	Nome Public Schools	1		
North Slope Borough	North Slope	5	✓	43%
Northwest Arctic Borough	Northwest Arctic	9		80%
Petersburg Census Area	Kake City	0		69%
	Petersburg City Schools	1	✓	52%
Prince of Wales-Hyder	Annette Island	1		59%,
	Craig City	1		79%
	Hydaburg	1		82%
Sitka City and Borough	Sitka City and Borough	0	✓	33%
Skagway Municipality	Skagway	0		--
Southeast Fairbanks Census Area	Alaska Gateway	7	✓	92%
	Delta-Greely	0		39%
Valdez-Cordova Census Area	Chugach	0		--
	Copper River	0		51%
	Cordova City	1		53%
Wade Hampton Census Area	Kashunamiut	1		91%
	Lower Yukon	25		85%
	St. Mary's	1		88%
Wrangell City and Borough	Wrangell City	1		57%
Yakutat City and Borough	Yakutat City	1		85%
Yukon-Koyukuk Census Area	Galena City	0		56%
	Yukon Koyukuk Schools	5	✓	81%
	Iditarod Area	7		67%

Existing Nutrition Programs and Partnerships in Alaska

Below are examples of existing nutrition programs and partnerships in Alaska that use public health approaches.

Alaska Alliance for Healthy Kids is a coalition composed of individuals, families, communities, schools, worksites, health care, public education, media, industry, and government and non-government organizations committed to preventing childhood obesity and improving the health of Alaskans. The alliance has four priority areas that embrace a public health approach: 1) to promote comprehensive, high quality, physical and health education (K-12) for Alaska Students; 2) Promote adoption and integration of evidence-based or consensus guidelines for prevention, screening, diagnosis, and treatment of overweight and obesity from pregnancy through adolescence by primary healthcare providers; 3) Improve access to healthy choices and healthy environments for parents and children, to increase healthy eating, physical activity, and breastfeeding and; 4) Maintain a comprehensive public education and communications effort that uses a social marketing approach to promote physical activity and other health messages for children and their families.

Healthy Futures is a program of the Alaska Sports Hall of Fame that empowers Alaska's youth to build the habit of daily physical activity. In partnership with the Alaska Department of Health and Social Services, Healthy Futures runs the Healthy Futures Challenge that provides incentives to students to be active and complete a physical activity log.

Play Every Day is a social marketing campaign that was launched in 2012 by the Alaska Department of Health and Social Services Obesity Prevention and Control Program to increase public awareness about the risks of childhood obesity and the importance of physical activity to prevent childhood obesity.

Diabetes Prevention and Control Program in Alaska offer a variety of outreach services including providing diabetes education presentations in schools and other community venues and supporting program and activities that encourage physical activity and healthy eating.

The **Store Outside Your Door** project is an Alaska Native Tribal Health Consortium Wellness and Prevention initiative to promote the knowledge and use of traditional foods and traditional ways. The initiative consists of a series of webisodes that highlight traditional foods from around the state.

The Farm to School Program, housed in the Alaska Division of Agriculture, is a designed to offer expertise in all areas of the state to pursue farm to school activities. It's overall goal is to increase the procurement and use of food grown in the state by public schools and to support activities that educate youth about the food system. Emerging evidence suggests that farm to school activities are an effective way to promote healthy eating among school aged children.

Culture Camps, operated throughout Alaska, teach Native youth about traditional food gathering and processing among other traditional activities. Although culture camps are not designed as nutrition programs per se, they offer an excellent opportunity to promote healthy eating and an active lifestyle.

New data

Nutrition Educator Survey Results

Eighty-one individuals completed the web-based survey. Of the 81, 53 respondents indicated that they were nutrition educators. Data are presented only for these 53 individuals since nutrition educators were the intended audience.

Table 14 shows the regions of Alaska that the respondents serve. Reponses were not mutually exclusive so an educator could select more than one region. All regions of the state were represented. Anchorage and Southeast Alaska had the greatest number of respondents.

Table 14
Census and borough areas represented by survey respondents

Census and Borough Area	No.
Aleutian/Pribilof	2
Anchorage	16
Bethel/Wade Hampton	4
Bristol Bay/Lake and Peninsula,/Dillingham	2
Denali/SE Fairbanks/Yukon-Koyukuk	4
Fairbanks/North Star Borough	7
Southeast	17
Matanuska-Susitna Borough	6
Kenai Peninsula Borough	5
Kodiak	4
Nome	3
Northwest Arctic	2
North Slope Borough	3
Valdez/Cordova/Glenallen	3

Table 15 shows that types of organizations that the nutrition educators represented. The majority of educators worked for WIC and Extension services.

Table 15
Types of organizations represented by nutrition educators

Organization type	Number
Extension Service	7
Health Department	2
University	5
Health corporation	4
WIC	14
School district	3
Food service	3
Clinic	5
Entrepreneur	2
Other	10

Prioritizing geographic regions and populations for nutrition education needs

An open ended question asked educators to identify the region(s) in Alaska whose nutrition education needs are unmet and whose needs they would prioritize. The overwhelming majority of educators prioritized the needs of rural communities. A few eductors also indicated that the nutrition education needs of communities on the Kenai Penninsula were also unmet.

Educators were also asked to identify population sub-groups in Alaska whose nutrition education needs are currently unmet and whose needs they would prioritize. Alaska Native people, low-income groups, and K-12 students were the most common responses. Less frequent responses included single men, older adults and parents.

Core nutrition messages

Respondents were asked to rank 8 nutrition messages in order of importance based on the needs of population that they serve. Table 16 lists the 8 nutrition messages ranked in descending order of importance. The messages that were identified as the most important to disseminate were: *Increase fruit and vegetable consumption*, *Increase physical activity and reduce time spent in sedentary behaviors* and *Increase healthy beverage consumption.*

Table 16. 8 nutrition messages ranked in descending order of importance.
1. Increse fruit and vegetagble consumption
2. Increase physical activity and reduce time spent in sedentary behaviors
3. Increase healthy beverage conumption
4. Increase whole grain consumption
5. Breastfeeding
6. Eat fewer energy dense foods, reduce calories
7. Increase subsistence/ traditional food consumption
8. Reduce sodium

Public Health Approaches

Educators were asked to indicate whether their nutrition education activities supported or involved eight common, evidence-based public health approaches to promoting healthy eating and an active lifestyle. Figure 6 shows that the most commonly used public health approaches were: supporting farmers' markets; nutrition and/or physical activity policies; and school, community, or home gardens.

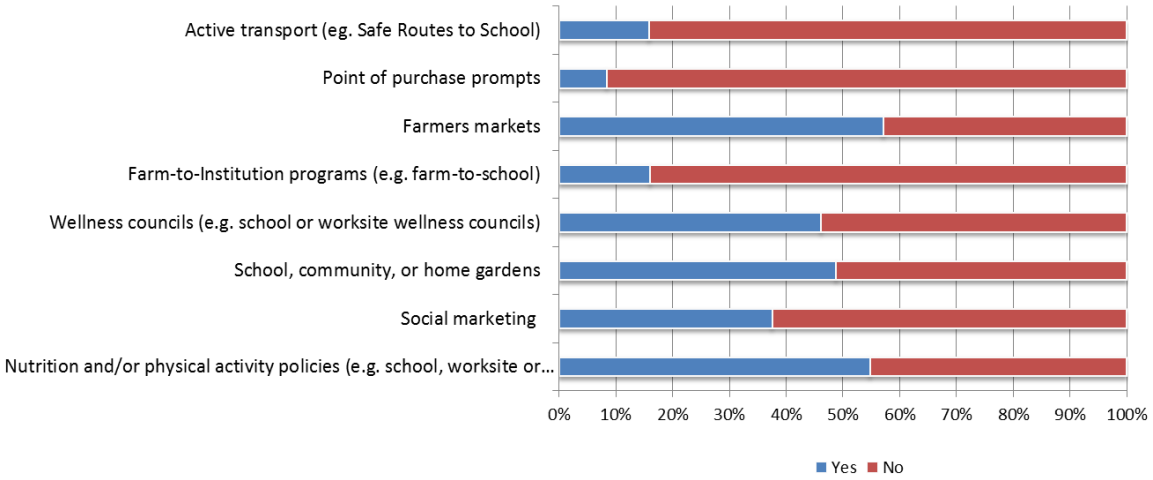

Figure 6: Proportion of educators who report supporting or involving 8 common public health approaches

If an educator did not use a given public health approach, they were asked to indicate whether they were interested in using the approach, which is in indication of opportunity (figure 7). 80% of educators were interested in supporting farmers markets or gardens. Less than half of respondents were interested in Active Transport activities.

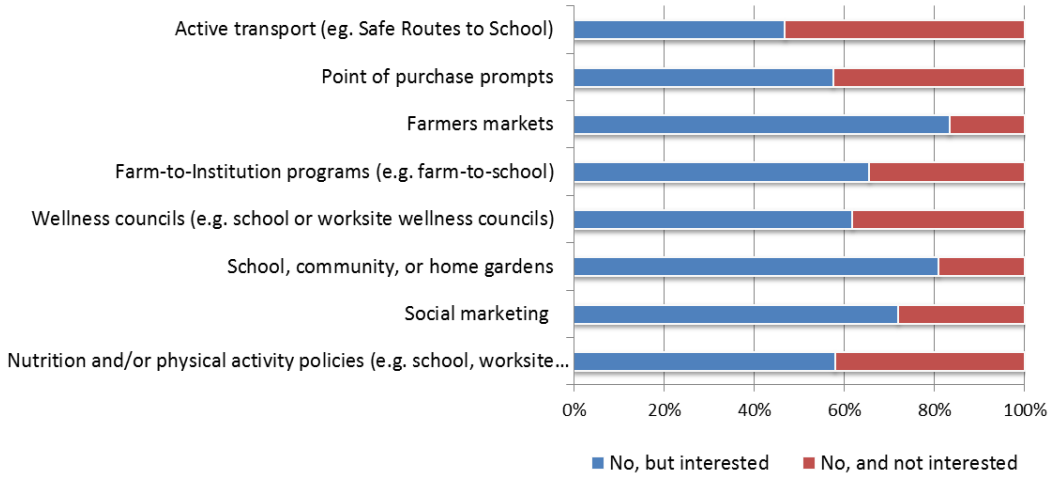

Figure 7: Proportion of educators who report interest in supporting or involving 8 common public health approaches

Educators were then asked to indicate their confidence in supporting the same eight public health approaches. Over 75% of educators indicated that they were very confident in their ability to support nutrition and/or physical activity policies (figure 8). In contrast, less than 20% were confident in their ability to support active transport programs, a finding that may highlight a training need.

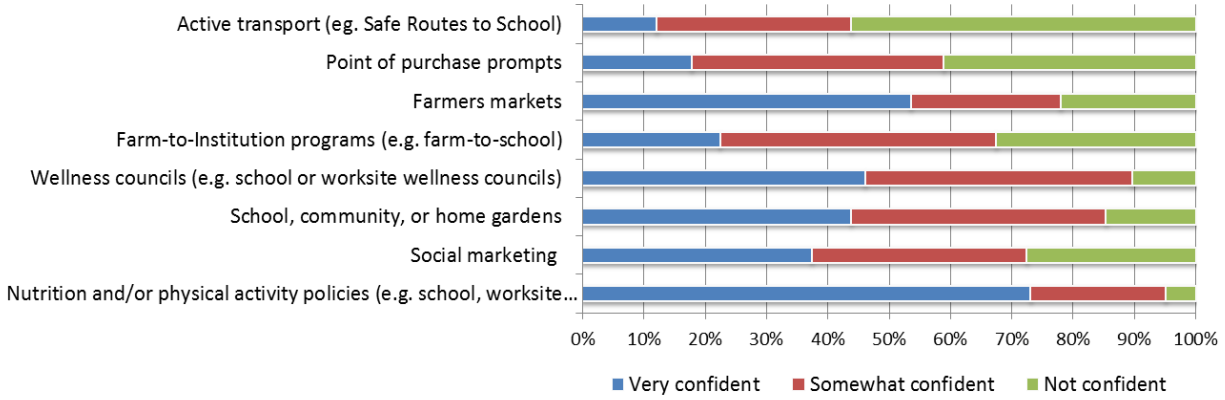

Figure 8
Confidence levels of educators in supporting or involving 8 common public health approaches

Delivery Method

More than two-thirds of educators ranked face-to-face delivery as the most effective way of reaching the intended audience followed by community-based and public health approaches and then distance delivery.

Partnerships

More than 50% of educators reported partnering with WIC and Head Starts (figure 9). Although less than 40% of educators currently partner with school-based program and SNAP offices, nearly half expressed an interest in forming these partnerships.

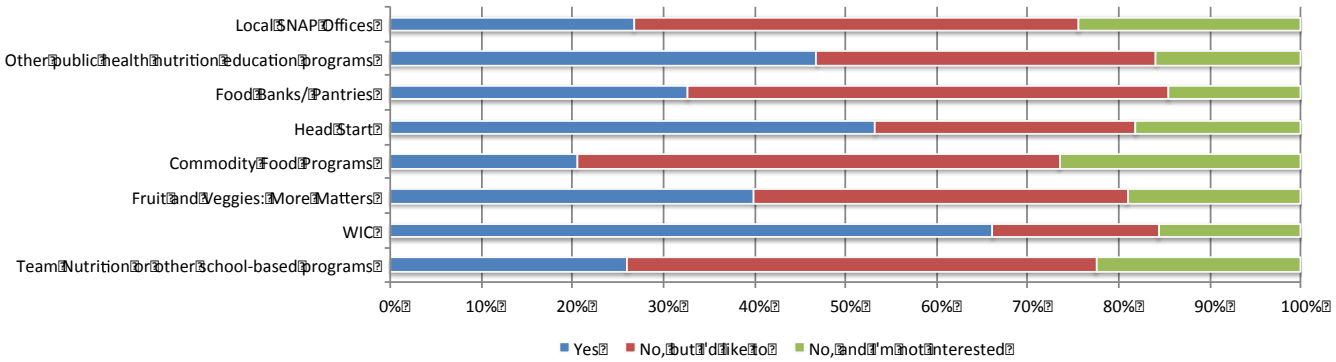

Figure 9
Percentage of educators reporting partnerships with 8 public health programs or organizations

Nutrition Education Needs among Alaska Native and/or Rural Populations

The majority of educators indicated that existing nutrition education programs and materials are only somewhat effective at meeting the needs of Alaska Native people and rural communities. More than 10% indicated that existing programs and materials were not at all effective at meeting the needs of rural communities (figure 10).

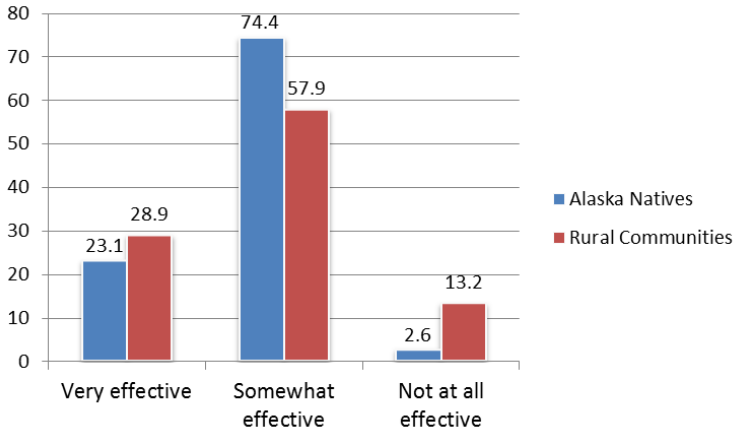

Figure 10
Educators' perceptions on the effectiveness of existing programs and materials for Alaska Natives and rural communities

In-depth interview results Nutrition educators perceptions of nutrition education needs in Alaska

In-depth interviews were conducted with 53 educators around the state. All regions were represented except Denali/SE Fairbanks/Yukon-Koyukuk, North Slope Borough, Valdez/Cordova/Glenallen (table 17). Four individuals did not work within a single region and instead worked statewide.

Table 17
Number of interviews and organizations represented by census and borough region

Census and Borough Area	Number of Interviews
Aleutian/Pribilof	2
Anchorage	9
Bethel/Wade Hampton	2
Bristol Bay/Lake and Peninsula,/Dillingham	
Denali/SE Fairbanks/Yukon-Koyukuk	0
Fairbanks/North Star Borough	12
Southeast	13
Matanuska-Susitna Borough	2
Kenai Peninsula Borough	3
Kodiak	1
Nome	3
Northwest Arctic	3
North Slope Borough	0
Valdez/Cordova/Glenallen	0
Statewide	4

Findings from the interviews are organized around ten themes: prioritizing regions and populations in Alaska, existing nutrition education efforts, nutrition education curricula needs, food access, delivery method, time, nutrition knowledge, nutrition and health priorities, perception of public health approaches, and partnerships.

Prioritizing regions and population subgroups in Alaska for nutrition education

K-12 students were considered a critical group for receiving nutrition education for a number of reasons. Educators recognized the importance of promoting and establishing healthy behaviors at a young age to prevent the development of chronic diseases. Educators also noted that home economics programs have been cut from schools and that there are multiple generations who lack cooking skills, which are viewed as an essential component of a healthy lifestyle. The needs of low income and rural/ remote regions were also perceived as important. Some

educators mentioned the importance of providing nutrition education to seniors because of their growing numbers and because they are often responsible for the care of their grandchildren.

Existing nutrition education efforts

The majority of nutrition education in Alaska is conducted at the individual level through direct-education; this includes education through SNAP-Ed, WIC, and food pantries. A number of public health approaches are also being conducted in Alaska primarily through State organizations such as the Obesity Control and Prevention Program and the Alaska Native Tribal Health consortium.

Nutrition education curricula needs

Although educators reported using a variety of curricula, they responded similarly when asked about the relevance of the curricula to Alaskans. Many educators commented that existing curricula might not be relevant to Alaska Native people or rural populations. In particular, a number of educators suggested that curricula needed to be tailored to reflect Alaska Native foods, dietary patterns, and socio-economic conditions. Likewise, they indicated the importance that curricula be tailored to reflect the foods available in rural communities. For example, educators expressed the importance of conveying the benefits of using not only fresh vegetables and fruit, but also canned and frozen since these forms are more widely available. One educator commented that mistrust can be created between educator and client if inappropriate materials are used. With respect to the needs of K-12 students, educators expressed that there is need for strong nutrition and health curricula in schools.

Food Access

The majority of nutrition educators spoke about the limited availability and lack of variety of "healthy" foods in rural communities. Some educators, however, emphasized that although access to healthy foods may indeed be more limited in rural communities, that it is possible to consume a healthy diet with careful planning. In reference to a subsistence diet, one educator commented that rural communities have access to healthy eating, "it's just not what the national picture looks like." Educators also commented on the importance of aligning nutrition messages with the availability of foods in communities. Existing materials that promote fresh produce and whole grains create a situation where individuals cannot easily act on what they have learned.

Delivery method

The majority of educators viewed direct education that incorporates "hands on" activities as the most effective delivery method. Cooking demonstrations were mentioned as one of the most effective approaches, although educators commented that they were very costly and

therefore not always a feasible approach. Educators noted that direct delivery is a relatively inefficient way to contact large numbers of people.

Time

Educators expressed that clients perceive lack of time as a major barrier to healthy eating. As a result, clients consume highly processed foods that are convenient to prepare and frequently eat out, especially for breakfast. Educators agreed that planning skills should be incorporated into education activities.

Nutrition Knowledge

Educators mentioned a number of factors that relate to nutrition knowledge. Educators commented that clients know which foods are healthy, but that knowledge alone is not a sufficient factor for change. There must be both motivation and/or environmental supports to promote change. Educators also related that there are multiple generations that lack cooking skills, particularly with respect to preparing healthy foods with a long shelf life (e.g. lentils and beans), which are more readily available in many regions in Alaska. Some educators mentioned health and nutrition literacy is poor and that clients' perceive that if a food is on a store shelf, than it must be good for them.

Nutrition and Health priorities

Educators considered obesity, diabetes, and substance abuse as the greatest health challenges facing their clients. Educators considered high intake of sugar sweetened beverages, low fruit and vegetable intake, lack of physical activity, and high intake of fast foods as the most pressing nutrition needs facing their clients. Of these nutrition needs, addressing the high intake of sugar sweetened beverages was mentioned with the greatest frequency.

Perceptions of a Public Health approach

When asked about the best approach to deliver nutrition education, the majority of educators responded that direct-education is the best approach. When asked specifically about public health approaches, the majority of educators commented on the importance of complementing, but not substituting, direct education with environmental change (i.e. public health approaches). Educators recognized a number of benefits to public health approaches including their contribution to changing social norms, particularly when applied in schools, and their broader population impact. They also emphasized the importance of providing a consistent message, and that contradictory messages would be counter-productive. Educators cautioned that stakeholders need to set a reasonable time frame when evaluating the impact of public health approaches since changes may be slower to detect. They also indicated that educators would need training to appropriately evaluate public health approaches.

Partnerships

Educators strongly supported creating partnerships to leverage resources and enhance the impact of each organization. Educators expressed that time constraints are the greatest barrier to creating partnerships and suggested that higher-level management, and not the educators themselves, should facilitate the partnerships. Several ideas were given to facilitate creating partnerships including the development of marketing tools, the creation of a list of all the agencies and the services they provide, setting up a task force, showcasing community successes, and even the use of Facebook. Respondents shared that having a form letter inviting partnerships would ease the time barrier in creating new partnerships. Financial support was expressed as another important aspect of creating new partnerships. Finally having a person dedicated to facilitating partnership statewide was expressed as key to successful partnerships.

Client Surveys

A total of 518 low-income individuals completed paper surveys. Respondents were recruited from eighteen sites: Anchorage WIC, Barrow WIC, Copper River Native Association Food Bank, Front Line Pantry in Wasilla, Homer WIC, Kana WIC in Kodiak, Kenai Peninsula Food Bank, Kenai WIC, Ketchikan Corps, Lutheran Social Services of Anchorage, Nome Community Center, Petersburg Salvation Army, Port Heiden Tribal Council, Seward Food Pantry, Upper Susitna food Bank, Wasilla WIC, and the Yukon Kuskokwim Health Corporation WIC in Bethel. Although many regions were represented, the sampling is not representative, which has implications for the interpretation of the data.

Desired dietary changes

Nearly two-thirds of respondents indicated that they would like to make changes to the foods that they eat (figure 11). The overwhelming majority of respondents indicated that they would like to eat more vegetables and fruit (97%) and whole grains (81.5%). Interestingly, more than 80% of respondents indicated that it would be very easy or somewhat easy to eat more vegetables, fruit, and whole grains, which is counterintuitive given the poor access, both in terms of cost and availability, to produce in Alaska. Nearly three-quarters (72.8%) of respondents reported that they would like to reduce their intake of sugar-sweetened beverages. When asked how easy it would be to reduce their intake of sugar-sweetened beverages, 76.2% indicated that it would be easy or very easy. Less than 10% indicated that it would be very difficult to reduce their intake of sugar-sweetened beverages.

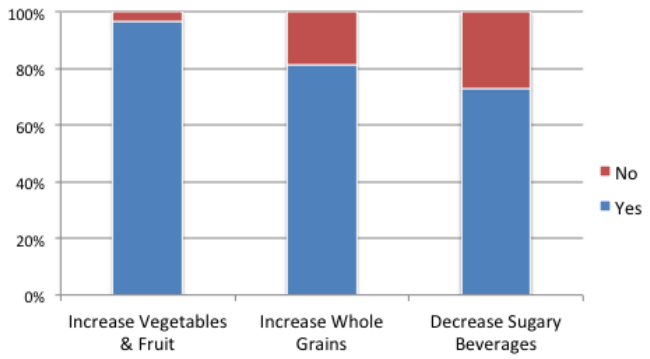

Figure 11
Percentage of individuals reporting a desire to make changes to the foods they eat

When asked what changes they would like to make to the foods they eat using an open-ended question, respondents listed similar changes. The most frequently reported changes, in descending order of frequency, included: increasing vegetable and fruit intake, decreasing sugar sweetened beverage and added sugar intake, and decreasing intake of highly processed and fast foods.

Barriers to healthy eating

Respondents were asked to indicate whether they agreed with ten statements that represent common barriers to healthy eating (figure 12). More than 80% of respondents agreed that healthy food was too expensive. Nearly half of respondents (48.3%) agreed that restaurants where they eat aren't that healthy. Over two-thirds of respondents agreed that healthy food goes bad too quickly, which may suggest that respondents associate healthy foods with fresh foods. Interestingly not knowing how to choose or cook healthy foods was not considered barriers. This suggests that environmental factors (i.e. access to healthy foods) may be more of a barrier to healthy eating than knowledge or cooking skills.

Figure 12
Individuals' perceptions about common barriers to healthy eating

More than three-quarters of respondents indicated that healthy eating was very important to them (figure 13a). Although only 13% of respondents indicated that the foods they eat are somewhat or very unhealthy, 71% indicated that the food they eat is somewhat healthy, suggesting some room for improvement (figure 13b).

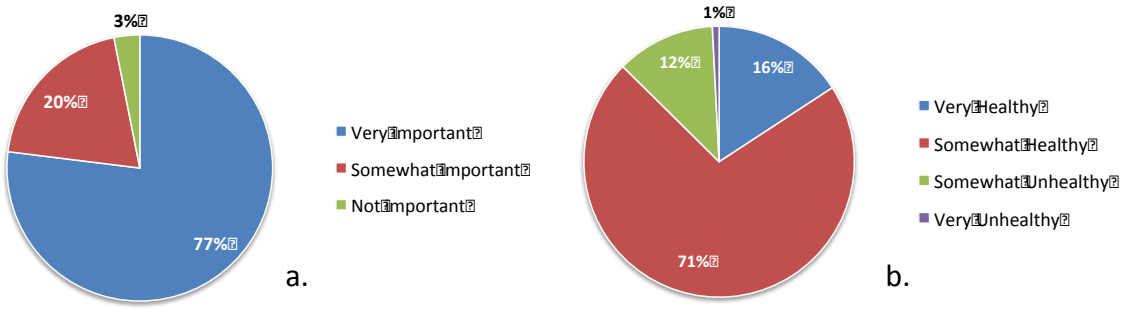

Figure 13
Perceptions of the importance of healthy eating (a) and the healthfulness of their current diet (b)

Nutrition education needs

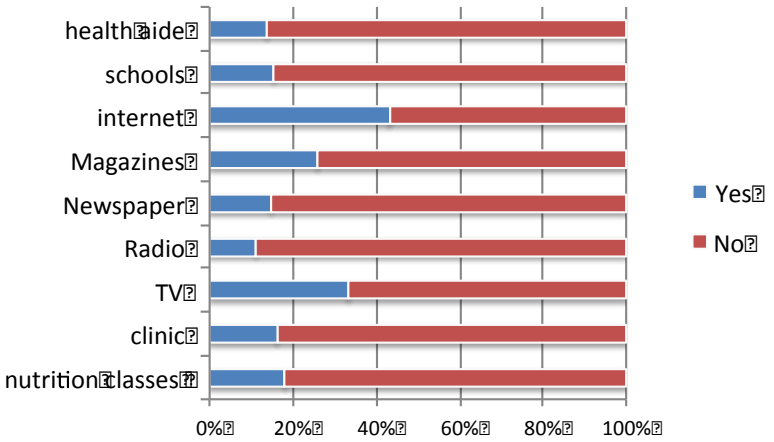

Figure 14
Sources of nutrition information for low-income individuals

Internet was the most common source of nutrition information, followed by television (figure 14). Fewer than 20% of respondents reported getting their nutrition information from nutrition classes, clinics, health aids, or schools, which may be the most reliable sources.

Internet was also reported as the respondents' desired way to learn about nutrition (figure 15).

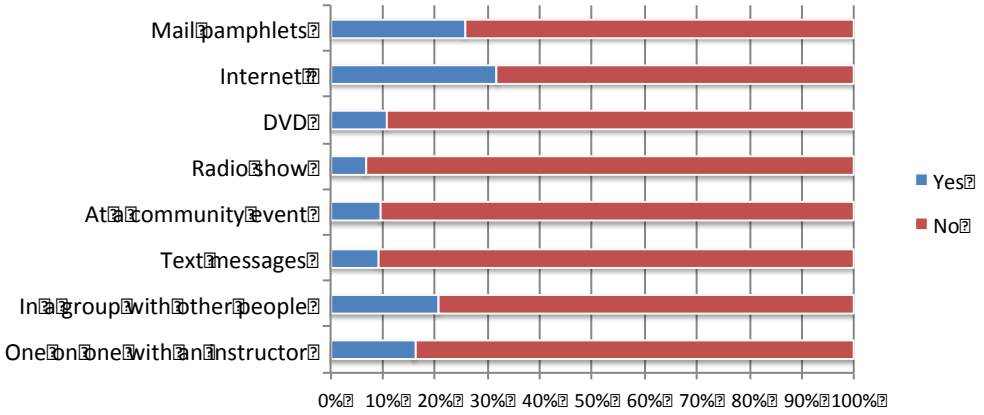

Figure 15
Desired sources of nutrition information for low-income individuals

Approximately 50% of respondents reported wanting to learn how to buy healthy food on a budget. Less than 20% reported wanting to learn what are healthy foods (figure 16).

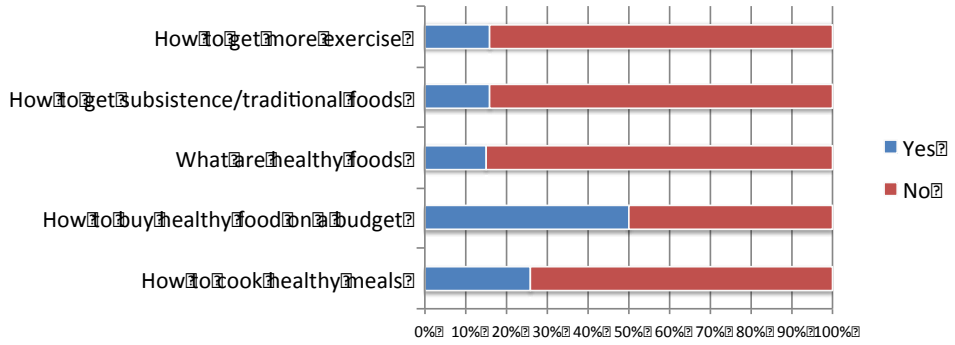

Figure 16
Interest in learning about 5 nutrition topics

When asked what makes it difficult to learn about nutrition, approximately one-third reported that it is difficult to find nutrition classes. Less than 20% responded that they simply were not interested in nutrition classes.

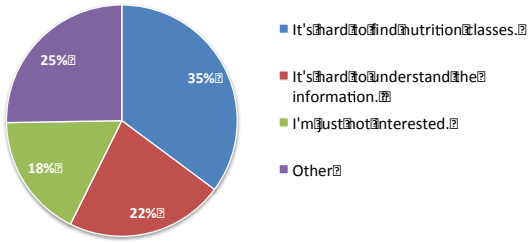

Figure 17: Perceptions of access to nutrition classes

IV. Implications and Recommendations

Summary

SNAP-Ed plays an important role in Alaska in improving diet quality and health outcomes, primarily through direct education. By enhancing participation in community-based and public health approaches, SNAP-Ed has the potential to reach a wider audience, including individuals in rural communities who are currently un- or under-served. By tailoring SNAP-Ed activities for Alaska Native people, SNAP-Ed also has the potential to reduce substantial nutrition-related disparities. To maximize efforts and efficiency in services, in the short-term SNAP-Ed should consider prioritizing a social marketing approach that encourages increased intake of vegetables and fruits and decreased intake of sugar-sweetened beverages. Schools are an ideal partner for enhancing and/ or establishing public health approaches because they are the focal point of many communities in Alaska and are linked with families and communities. Furthermore, K-12 students are a critical audience for prevention. In the long-term partnerships with actors along the food supply chain (e.g. producers, distributors, and retailers) should be fostered to promote improvements to food access. Progress toward SNAP-Ed goals should be monitored continuously through standardized measures and through partnerships with existing surveillance systems. SNAP-Ed should consider forming a workgroup composed of key stakeholders that meets to address shared messaging, training opportunities, and evaluation efforts.

Recommendations will be described below in the following five areas: populations, messages, approach, evaluation and coordination and collaboration.

POPULATIONS

SNAP-Ed nutrition education and obesity prevention efforts should target geographic regions and populations with the greatest need and potential for impact. Table 18 provides an overall rank for each of the 29 census and borough regions based on a combined score that sums population size rank and rankings for three indicators of risk—poverty levels, fruit and vegetable intake, and obesity prevalence. Population size is weighted more heavily than the indicators of risk since it is an important measure of potential impact. The five regions with the lowest rankings, which are interpreted as having the greatest need and potential for impact, include in ascending order: Bethel Census Area, Matanuska-Susitna Census Area, the Municipality of Anchorage, Kenai Peninsula Borough, and Nome Census Areas. SNAP-Ed programming and intervention delivery should focus on these regions.

SNAP-Ed programming and intervention delivery should also focus on Alaska Natives and youth. Both quantitative and qualitative data highlight the substantial socio-economic and health disparities experienced by Alaska Native people compared to Whites. For example, statewide, Alaska Native people are more than six times more likely to fall below the federal poverty threshold and at least twice as likely to experience food insecurity as whites. They're also substantially less likely to consume recommended levels of vegetables and fruit and substantially more likely to consume sugar sweetened beverages. Furthermore, the majority of

educators indicated that existing curricula and messaging are not adequately tailored to Alaska foods, dietary patterns, and socio-economic conditions, something that would enhance their effectiveness. Healthy eating and an active lifestyle are behaviors that are established early in life, highlighting the importance of targeting K-12 students. SNAP-Ed programming and intervention delivery in schools has the potential to reach not only students but also parents and community members. Schools serve as the focal point of many Alaskan communities and SNAP-Ed activities in schools can readily be linked to families and communities. Schools also have existing infrastructure (e.g. wellness policies) that lend themselves to partnerships with SNAP-Ed.

Table 18
Ranking of Census and Borough Areas**

Public Health Region	Food Insecurity Rank	Census and Borough Area	Pop. Rank	Poverty Rank	< 5 Fruit & Veg Rank	Overweight & Obesity Rank	Overall rank**
Anchorage and Mat-Su Region	4	**Municipality of Anchorage**	**1**	**24**	**16**	**18**	**3**
		Matanuska-Susitna	**3**	**16**	**12**	**11**	**2**
Gulf Coast Region	3	**Kenai Peninsula Borough**	**4**	**15**	**11**	**23**	**4**
		Kodiak Island Borough	7	20	18	12	8
		Valdez-Cordova	10	22	6	6	12
Interior Region	5	Denali Borough	25	18	15	17	24
		Fairbanks North Star	2	25	19	20	6
		Southeast Fairbanks	15	12	8	8	16
		Yukon-Koyukuk	17	5	3	14	14
Northern Region	2	**Nome Census Area**	**9**	**2**	**2**	**25**	**5**
		North Slope Borough	11	8	14	21	11
		Northwest Arctic Borough	14	4	1	5	9
Southeast Region	6	Haines Borough	22	19	23	26	23
		Hoonah-Angoon	24	7	-	3	-
		Juneau City and Borough	5	26	13	15	7
		Ketchikan Gateway	8	21	21	10	13
		Petersburg Census Area	20	11	22	7	21
		Prince of Wales-Hyder	16	9	5	4	15
		Sitka City and Borough	12	17	20	22	17
		Skagway Municipality	27	-	-	-	-
		Wrangell City and Borough	23	13	7	16	22
		Yakutat City and Borough	29	-	-	-	-
Southwest Region	1	Aleutians East Borough	21	10		19	18
		Aleutians West	18	23	9	13	20
		Bethel Census Area	**6**	**3**	**4**	**24**	**1**
		Bristol Bay Borough	28	14	-	1	-
		Dillingham Census Area	19	6	17	9	19
		Lake and Peninsula	26	-	-	2	-
		Wade Hampton	13	1	10	27	10

**** Overall rank is based on the sum of the census and borough regions: [poverty ranking + vegetable and fruit intake ranking + obesity prevalence ranking + (population size*5].**

MESSAGES:

In Alaska, the most prevalent dietary shortfalls are inadequate vegetable and fruit intake and high sugar-sweetened beverage intake. SNAP-ed messages should focus on these two prevalent dietary behaviors. Messaging should provide realistic recommendations and goals given the realities of the nutrition environment in Alaskan communities. SNAP-Ed in Alaska is also well poised to promote the subsistence and/or traditional dietary patterns that are important to diet quality and food security in rural communities. National dietary guidance will likely need to be tailored to resonate and be effective with rural communities and Alaska Native people. Messages should be continuously evaluated and refined to maximize impact and effectiveness.

APPROACH:

Alaska is well positioned to put into practice the comprehensive community- based and public health approaches that are encouraged with the transformation of SNAP-Ed into a Nutrition Education and Obesity Prevention Grant Program. By virtue of the vast distances, low population density and lack of affordable transportation between communities, the majority of communities in Alaska are un- or under-served by SNAP-Ed, making community- based and public health approaches particularly important. Public health approaches have the potential to reach virtually all low-income populations efficiently and cost-effectively.

Systems changes at multiple levels of the social ecological model will have the most widespread and sustainable impact and should be encouraged in the long-term. In the short-term, social marketing and mass communication through school, store and community campaigns—based on rigorous formative research-- are strongly encouraged and should be prioritized for a number of reasons. First, focusing on a single approach maximizes resources, both financial and staffing. Second, social marketing campaigns require minimal financial investment. Third, findings from the client surveys indicated that the majority prefers to receive their nutrition information from the Internet. Although these data are not representative of the interior, northern, and southwestern regions of the state, other data suggest that social media (e.g. Facebook) is prevalent state-wide via cellular phone service. Food Heroes is an exemplary model of a social marketing campaign . In the longer-term, improvement to the food environment through policy changes should be encouraged.

EVALUATION

The development of a logic model that includes activities and short- and long-term goals at all levels of the socio-ecological model is strongly encouraged. Progress with the SNAP-Ed goals should be monitored continuously and ideally evaluation efforts should coordinate with existing state-wide surveillance systems such as the BRFSS and YRBS. Direct education should be evaluated using standardized measures that assess changes to SNAP-Ed client's knowledge, attitudes, and behaviors. Evaluation of community-based and public health approaches can be less intuitive than evaluation of direct education. Training and an evaluation toolkit should be available to educators to facilitate measuring progress in policies, systems and environments.

COLLABORATION AND COORDINATION

To leverage financial and intellectual resources and to maximize staffing and administrative infrastructures, SNAP-Ed should enhance communication and collaboration with state and community organizations. Despite the vast distances, Alaska is a small state where the number of key stakeholders is relatively small and it is possible to engage in conversation relatively easily. SNAP-Ed should consider forming a workgroup composed of key stakeholders that meets to address shared messaging, training opportunities, and evaluation efforts. Key stakeholders could include the Obesity Prevention and Control Program, the Alaska Alliance for Healthy Kids, Food Bank of Alaska, the Alaska Food Coalition, Alaska Food Policy Council, Family and Nutrition Services, and School Nutrition Services, Senior and Disabilities Services who receive Title III senior citizen community/ Meals on Wheels funding, and the Alaska Native Tribal Health Consortium Wellness Program that manages the Food distribution Program on Indian Reservations.

Continued partnership with school districts is strongly encouraged. Direct education in schools should be complemented with comprehensive public health approaches. Partners could include the Alliance for Healthy Kids and Healthy Futures

In keeping with efforts to create systems change, in the long-term, SNAP-Ed is encouraged to partner with player along the food supply chain, including producers, distributors, and retailers. Enhanced communication with the Alaska Food Policy Council has the potential of facilitating this goal.

SNAP-Ed, in partnership with other nutrition education and public assistance programs, should consider mapping the nutrition environment in the state. The Map2Healthy Living developed by the Michigan Nutrition Network offers an excellent example.
http://map2healthyliving.org/map2hl.aspx
Elements of the nutrition environment could include Title 1 schools, nutrition education programs, farmers markets, and socio-demographic information. Partners could include: Food Bank of Alaska, the Alaska Food Coalition, the Alaska Native Tribal Health Consortium, and the Alaska Food Policy Council.

This material was funded in part by USDA's Supplemental Nutrition Assistance Program. The Supplemental Nutrition Assistance Program provides nutrition assistance to people with low income. It can help you buy nutritious foods for a better diet. To find out more, in Alaska call (907) 465-3347 or contact your local social services office.